

connexions which he had, was to force in the membrane surrounding the orifice of the urethra, and thus form a *cul de sac*, or funnel-shaped depression. At length the orifice of the canal was opened by the introduction of a small penis, and gradually the canal itself assumed its present dimensions, viz., those of a small vagina. He further affirmed that during the act of copulation, the rudimentary organ enters into a state of erection, and that the friction produces a perfect ejaculation of the seminal fluid. Up to the age of twenty years, he considered himself, as we have mentioned, to be a girl. At about that time, however, an inguinal hernia, with which he was affected, becoming strangulated, the genital organs were examined by a surgeon, and his true sex discovered. This was followed by a certain revolution in his feelings, the petticoat was immediately thrown aside with disdain, and the newly-baptized man would fain have a mistress, but here nature refused all assistance. His attempt at active copulation was all vain, and he was obliged, much against his pride, to return to his old habits and former acquaintances. It is a fact, worthy of remark, that the testicles had remained concealed in the abdomen up to the period of his being operated on for the hernia. This, doubtless, contributed a great deal to the error of sex.—*Gazette des Hopitaux*, No. 11.

GENERAL ANATOMY AND PHYSIOLOGY.

6. *Ciliary Motions in Man.*—In our preceding number, (p. 196,) we gave an account of the discovery, by Purkinje, of ciliary motions in the cavities of the brain, and of the observations of Valentin on the same subject. Dr. C. T. Von Siebold, we learn from an article in a recent number of our esteemed cotemporary the *British and Foreign Medical Review*, has continued the investigations of the experimentors just named, and has added some facts which he has noticed, respecting the existence of the vibrating cilia upon the mucous membranes in man. He found these cilia upon the whole surface of a nasal polypus, one hour after its removal from an adult. The length of these ciliae was 0.0028 and 0.0022 of an English line. The motions of the cilia upon one polypus which was examined, were found to be quite regular in their rhythm: in some parts they moved backwards and forwards 300 times, in others 320 times, in others 190 times, in a minute. The movements were always in the same direction; and, when once they ceased, were never resumed. By a very accurate examination, M. Siebold says that he has ascertained that each cilium curves its free extremity towards the part to which it moves, and that small globules of mucus, when in the vicinity of this oscillating body, are thus propelled in the same direction as the curve of the cilia. On condylomata at the entrance of the vagina no cilia could be discovered. They were also not found on the bronchial mucous membranes of those who had died of pneumonia, or of those who had suffered before death from a copious bronchial mucous secretion. In warm weather, also, it is useless to look in the human corpse for the cilia upon mucous membranes. M. Siebold has examined other membranes without finding any cilia; e. g. synovial membranes, sheaths of tendons, the internal surface of arteries and veins, that also of the vessels of the placenta, as well as serous membranes in animals the mucous membrane of whose bronchial apparatus presented an abundance of cilia. M. Siebold recommends all those who are anxious to examine this phenomenon to first experiment upon bivalves, (*Unio pictorum*, *Anodonta anatina*, *Cyclas cornea*;) for in them the cilia are most evident and their motions most easily recognised, abounding as they do upon their gills, tentacula, intestinal canal, &c. Having once witnessed the structure in these animals, it will be readily ascertained in man and other animals.—*Medizinische Zeitung*, No. 28, 1836.

7. *Period during which divers can stay under water.*—The *Magazine of Natural History*, for December last, contains an interesting article on this subject by Dr. LEFEBVRE, a French navy surgeon. Very extraordinary statements have been long current, as to the length of time that divers can remain submerged, and their falsity seems now to be established by the careful observations of Dr. Lefebvre. When stationed in the roads of Navarin, Dr. L. noted on three occasions, the pe-

riods of time which some of the best of the Greek divers, who have been long celebrated for their expertness, remained under water. These divers from their youth, are accustomed to dive and remain a long time under water. Dr. F. has seen them bring cannons and anchors; and tear the sheets of copper from wrecks lying at the depth of 100 and 120 feet. At a like depth they will penetrate into the interior of sunken vessels and bring away articles of a small size.

Dr. F. noted down at three successive times in the course of the year 1829, the period during which these divers remained under water. The articles for which they went lay at the depth of 100 feet, and the temperature of the external air was 24° R. The following are the results of his observations:

| 1st series. | 2nd series. | 3d series. |
|---------------------|---------------------|---------------------|
| 1st diver . . . 86" | 1st diver . . . 65" | 1st diver . . . 50" |
| 2 " . . . 69" | 2 " . . . 74" | 2 " . . . 65" |
| 3 " . . . 86" | 3 " . . . 90" | 3 " . . . 95" |
| 4 " . . . 94" | 4 " . . . 98" | 4 " . . . 90" |
| | 5 " . . . 84" | 5 " . . . 60" |

Thus the largest period during which the most expert diver could remain under water was but little more than one minute and a half.

8. *Functions of the 5th, 6th and 7th pairs of nerves.*—The *Revue Médicale*, for April, 1836, contains an interesting case of paralysis of the face, communicated by Dr. L. TANQUEREL DESPLANCHES, illustrative of the functions of the 5th, 6th and 7th pairs of cerebral nerves, and confirming the prevalent opinion, that the 5th presides over the sensibility, and the seventh over the mobility, of the face. The author says, he has seen eight cases of the same affection in which the anatomical lesions illustrate the same fact. In the case just alluded to there was paralysis of the external rectus muscle of the eye, caused by pressure upon the 6th pair of nerves by the ophthalmic vein, which was extremely dilated.

9. *Superfetation.*—An instance of this has been recorded by Dr. MOEBUS, of Dieburg, in *Zeitschrift per die Staatsärzneikunde*, for 1836. A female, æt. 35, married since 11 years and the mother of four children, on the 16th Oct. 1833, was delivered of a female infant, fully developed; and on the 18th Nov. following, thirty-three days subsequently, gave birth to a second daughter, also fully developed but feeble.

10. *On the Function of the Medulla Oblongata and Medulla Spinalis, and on the Excito-motor System of Nerves.*—Dr. MARSHALL HALL communicated to the Royal Society, at their meeting on the 2nd of March last, a memoir on this subject, the object of which is to unfold what he calls a great principle in physiology; namely, that of the special function, and the physiological and pathological action and reactions of the true spinal marrow, and of the excito-motor nerves. The two experiments which he regards as affording the type of those physiological phenomena and pathological conditions, which are the direct effects of causes acting in the spinal marrow, or in the course of the motor nerves, are the following:—1. If a muscular nerve be stimulated, either mechanically by the forceps, or by means of galvanism passed transversely across its fibres, the muscle or muscles to which it is distributed are excited to contract.—2. The same result is obtained when the spinal marrow itself is subjected to the agency of a mechanical or galvanic stimulus. The following experiment, on the other hand, presents the type of all the actions of the reflex function of the spinal marrow, and of the excito-motor system of nerves, and of an exclusive series of physiological and pathological phenomena:—If in a turtle, from which the head and sternum have been removed, we lay bare the sixth or seventh intercostal nerve, and stimulate it either by means of the forceps or galvanism, both the anterior and posterior fins, with the tail, are immediately moved with energy. Hence the author infers the existence: 1st, of a true spinal marrow, physiologically distinct from the chord of intra-spinal nerves; 2ndly, of a system of excito-motor nerves, physiologically distinct from the sentient and voluntary nerves; and, 3dly, of currents of nervous influence, incident, upwards, downwards, and reflex with regard to the spinal marrow.

The author illustrates his peculiar views by several experiments and pathological observations, which appear to him to show that muscular movements may occur, under circumstances implying the cessation of sensation, volition, and every